

VS/MR/AD1 Series

COPEC®

The VS/MR/AD1 Series is your material solution for applications in the consumer electronics section. The series features an exceptionally silky and velvety surface, accompanied by an outstanding resistance to skin oil, sun cream and olive oil. The compounds convince due to their excellent adhesion to polar thermoplastics such as ABS, PC and PC/ABS.

Typical applications

- Ear phones
- Game consoles
- Handles and grips for consumer applications
- Remote controls
- Seals

Material advantages

- Easy coloring
- Excellent color stability
- Good weathering resistance
- Insert molding possible
- Pleasant surface feel (Soft touch)
- Resistance against skin oil, sunscreens and olive oil
- Smooth and silky surface

Processing Method: Injection Molding

	Color	Hardness Shore A DIN ISO 7619 ShoreA	Density DIN EN ISO 1183-1 g/cm ³	Tensile Strength ¹ DIN 53504/ISO 37 MPa	Elong. at Break S2 ¹ DIN 53504 / ISO 37 %	Tear Resistance DIN ISO 34-1 N/mm	Adhesion Renault D41 1916 (ABS) ² N/mm	Adhesion Renault D41 1916 (PC) ² N/mm
CC6FDN	natural	67	1.200	8.5	800	23.0	25.0	23.0
CC7FDN	natural	73	1.200	9.5	850	28.0	34.0	31.0

¹ Deviating from ISO 37 standard test piece S2 is tested with a traverse speed of 200 mm/min.

² The adhesion quality depends on mold design, product geometry and process parameters.

All values published in this data sheet are rounded average values.
Specification limits are based on three-fold standard deviation from the average value.

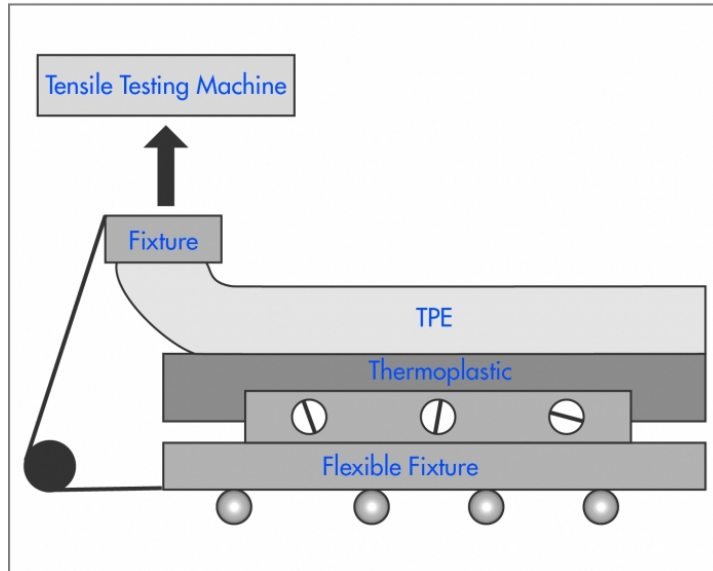
This datasheet is an extract of the KRAIBURG TPE program. Please contact KRAIBURG TPE to select the compound suitable for the requirements.

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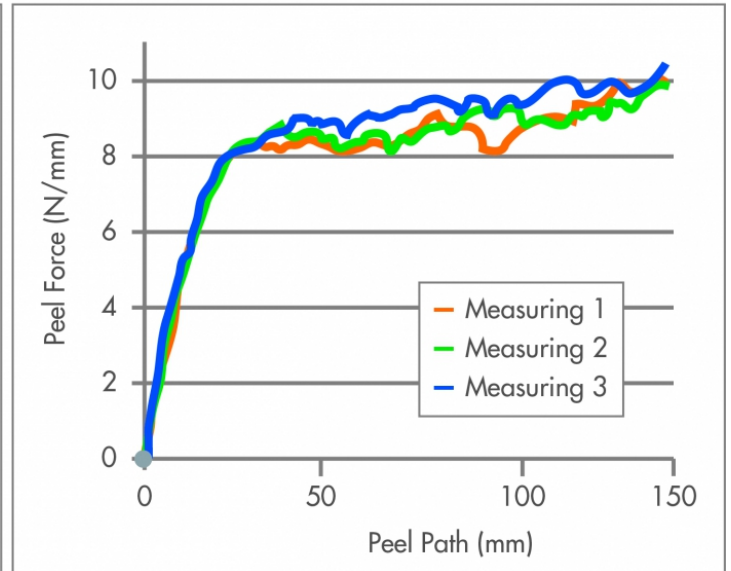
Description peel test

Peel test according to „Renault D41 1916“ standard

Test Setup



Example Diagramm as result of a peel test



The peel force is measured by a tensile testing machine in N/mm, in relation to the peel path. Test piece dimensions: Thermoplastic part: 130 x 22 x 2 mm, TPE part: 130 x 20 x 2 mm.

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Processing Guideline Injection Molding

Cylinder temperature	200 - 180 - 160 °C, max. 220 °C (392 - 356 - 320 °F, max. 428 °F)
Hotrunner	Hot runner temperatures: 180 - 220 °C (356 - 428 °F). The runner should be empty after a maximum of 2 - 3 shots.
Injection pressure	200 - 1000 bar (2900 - 14504 psi) (depending on the size and weight of the part).
Injection rate	In general, the fill time should not be more than 1–2 seconds.
Hold pressure	We recommend to derive the optimum hold pressure from determining the solidification point, starting with 40 % - 60 % of the required injection pressure.
Back pressure	20 - 50 bar (285 - 710 psi); if colour batches are used, higher back pressure is necessary.
Screw retraction	If an open nozzle is used processing with screw retraction is advisable.
Mold temperature	The mold temperature depends on the hard component. A temperature exceeding 80 °C (175 °F) should be avoided. The common temperature is 40 - 60 °C (105 - 140° F).
Pre drying	To achieve optimum mechanical values the following procedures have to be kept: a. Material has to be predried efficiently. Air dryer - at least 4h/80 °C (4h/175 °F), residual moisture < 0,02%. b. Material has to be processed immediately after drying. Avoid moisture absorption in the funnel (funnel must be covered). c. Before opening the bag, material has to be at room temperature in order to avoid condensation due to cold material. d. Keep the filling level in the funnel low.
Needle shut-off	The use of a needle valve nozzle is advisable .
Screw geometry	Standard 3-zone polyolefine screw.
Residence time	The residence time is to be set as short as possible with a maximum of 10 minutes.
Cleaning recommendation	For cleaning and purging of the machine it is appropriate to use polypropylene or polyethylene. Machine must be PVC-free.

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